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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,375	08/28/2003	Crispin O'Brien	2003-IP-011793U1	7326
7590	10/26/2005		EXAMINER	
Robert A. Kent Halliburton Energy Services 2600 South 2nd Street Duncan, OK 73536			COLLINS, GIOVANNA M	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,375

Applicant(s)

O'BRIEN ET AL.

Examiner

Giovanna M. Collins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15-19, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-19 and 21 is/are rejected.
- 7) ☒ Claim(s) 1-12, 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1-12,15-19,21-23 are objected to because of the following informalities:

Claims 1,8 and 15 have an alternative expression that appears to be a Markush group.

However, the alternative expression is not in the correct format. For example, in claim 1, lines 2-3 should be changed to -- a first fluid selected from a group consisting of a foamed carbon dioxide fluid, an emulsion of carbon dioxide and a carbon dioxide gel --.

The same objection applies to claims 8 and 15.

Claims 2-7,9-12,16-19, and 21-23 depend from claims 1,8 and 15 and likewise are objected to.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Scott et al. 6,439,310.

Scott discloses a system for treating a subterranean formation comprising: a first fluid comprising a foamed carbon dioxide fluid, an emulsion of carbon dioxide, or a

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carbon dioxide gel wherein the first fluid is not a crosslinked fluid; and, a second fluid comprising an alkaline crosslinked fluid (see col. 6, lines 40-57).

Referring to claim 16, Scott discloses the second fluid's crosslinkages (see col. 6, lines 57, shows borate gel) are reversed at a pH below about 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pakulski et al. '5,360,558 in view of Constien et al. 4,541,935.

Referring to claims 15 and 17-19, Pakulski discloses a system for treating a subterranean formation comprising: a first fluid comprising a foamed carbon dioxide fluid, an emulsion of carbon dioxide, or a carbon dioxide gel wherein the first fluid is not a crosslinked fluid; and, a second fluid comprising an crosslinked fluid (col. 3, lines 6-20). Pakulski does disclose the second fluid comprises a guar or guar derivative which is a hydratable polymer (col. 4, lines 16-28 but does not disclose the second fluid is an alkaline cross linked fluid. Constien teaches that borate ions are a well known cross lining agents for guar (col.1, lines 61-63) which is a alkaline crosslinked fluid. As it well known in the art to have the guar crosslinked with a borate ion, it would be obvious to

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modify the system disclosed by Pakulski to have an alkaline crosslinked fluid of a guar crosslinked with a borate crosslinking agent as taught by Constien.

Referring to claim 16, Constien teaches a second fluid's crosslinkages (col.1, lines 61-63 guar crosslinked with borate) are reversed at a ph below about 8.

Referring to claim 20, Pakulski disclose the second fluid comprises proppant (col. 5, lines 48-52).

Allowable Subject Matter

3. Claims 1 and 8 would be allowable if rewritten or amended to overcome the objections.

Claims 2-7,9-12,22,23 would be allowable if rewritten to overcome the objections set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 15-19 and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Giovanna M. Collins whose telephone number is 571-272-7027. The examiner can normally be reached on 6:30-3 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gmc


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